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(54) Associative tickener for aqueous fabric softener

(57) A thickened aqueous fabric softener composition comprising at least one surfactant and a polymeric rheology modifier, wherein said polymeric rheology modifier is the polymerization product of (i) an alkyl ester of acrylic acid or methacrylic acid; (ii) a monomer selected from the group consisting of a vinyl-substituted heterocyclic compound containing at least one nitrogen or sulfur atom, (meth)acrylamide, a mono- or di-alkylamino alkyl (meth)acrylate, and a mono or di-alkylamino alkyl

(meth)acrylamide; and (iii) an associative monomer. The polymeric rheology modifier does not require a make down step to slurry or disperse it into a fabric softener composition. The thickened fabric softener compositions do not affect rewettability, nor do they build up on cloth in multi-cycle washing. In addition, the thickened fabric softener compositions provide softening and reduce the formation of wrinkles.



EUROPEAN SEARCH REPORT

Application Number

EP 00 11 7373

		DERED TO BE RELEVA	Relevant	CLASSIFICATION OF THE
Category	of relevant pas		to claim	APPLICATION (Int.Cl.7)
X,Y	EP 0 824 914 A (NAT 25 February 1998 (1 * page 2, line 26 - 1 * page 5, line 41 - 1 * page 10, line 1-2 * page 11, line 1-2	37 * - page 3, line 54 * - page 6, line 18 * - page 7, line 12 * 25 *	1-3	C11D3/37 C11D1/62 C11D1/835
X,Y	24 November 1998 (1 * column 2, line 5-	RRON MILAGROS C ET / 1998-11-24) -39 * 3 - column 4, line 34 - column 6, line 34		
Y	US 5 726 144 A (DEW 10 March 1998 (1998 * column 7, line 36	3-03-10)	1-3	
Y	EP 0 799 887 A (PRO 8 October 1997 (199 * page 1, line 5,6;	7-10-08)	1-3	TECHNICAL FIELDS SEARCHED (Int.CI.7)
Y	US 5 114 600 A (BIG 19 May 1992 (1992-0 * column 1, line 4-	5–19)	1-3	
	The present search report has	been drawn up for all claims		
	Place of search	Date of completion of the sea	rch	Examiner
	MUNICH	17 July 2002	Per	ntek, E
X : partidocu Y : partidocu A : techi O : non-	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with anot ment of the same category notogical background -written disclosure mediate document	E : earlier pat after the fil her D : document L : document	cited in the application died for other reasons f the same patent fami	lished on, ar

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EPO FORM 1503 03.82 (POKCO1)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 11 7373

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-07-2002

	Patent docume cited in search re		Publication date		Patent fan member(Publication date
ΕP	0824914	A	25-02-1998	US	5990233	A	23-11-1999
		••	20 02 1550	ÜŞ	6025431		15-02-2000
				AU	738546		20-09-2001
				AU	3415297		26-02-1998
				AU	739012	B2	
				AU	3415497		04-10-2001 26-02-1998
				AU	738390	B2	
				AU	3980997		20-09-2001 06-03-1998
				BR		A	
				BR		- •	20-07-1999
					9706654		07-08-2001
				BR	9710822		14-12-1999
				CA	2211754		16-02-1998
				CA	2211777		16-02-1998
				CA	2234774		19-02-1998
				DE	69703427		07-12-2000
				DE	69703427	T2	13-06-2001
				DE	69712278		06-06-2002
				EP	0825200		25-02-1998
				ΕP	0824914		25-02-1998
				EP	0859796		26-08-1998
				ES		T3	01-03-2001
				JР		Α	12-05-1998
				JP	10121030	A	12-05-1998
				JP	11514699	T	14-12-1999
				NZ	328554	A	28-01-1999
				NZ	328555	Α	28-01-1999
				NZ	330278	Α	28-02-2000
				SG	67989	A1	19-10-1999
				WO	9806757	A1	19-02-1998
				US	5840789	Α	24-11-1998
				ZA	9707297	Α	20-04-1998
				ZA	9707298	A	20-04-1998
US	5840789	Α	24-11-1998	US	5990233	Α	23-11-1999
				ΑU	738390	B 2	20-09-2001
				AU	3980997	Α	06-03-1998
				BR	9706654	Α	07-08-2001
				CA	2234774	A1	19-02-1998
				DE	69703427	D1	07-12-2000
				DE		T2	13-06-2001
				ĒΡ		A1	26-08-1998
				ĒS	2153681		01-03-2001
				ĴΡ	11514699	Ť	14-12-1999
				NZ	330278	-	28-02-2000
				WO	9806757		19-02-1998
				AU	738546	B2	20-09-2001

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 11 7373

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-07-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5840789	A		AU	3415297 A	26-02-1998
00 0040703	^		AU	739012 B2	
			AU	739012 B2 3415497 A	04-10-2001
			BR	3415497 A 9704366 A	26-02-1998
					20-07-1999
			BR	9710822 A	14-12-1999
			CA	2211754 A1	16-02-1998
			CA	2211777 A1	16-02-1998
			DE	69712278 D1	06-06-2002
			EP	0825200 A1	25-02-1998
			EP	0824914 A1	25-02-1998
			JP	10120526 A	12-05-1998
			JP	10121030 A	12-05-1998
			NZ	328554 A	28-01-1999
			NZ	328555 A	28-01-1999
			SG	67989 A1	19-10-1999
			US	6025431 A	15-02-2000
			ZA	9707297 A	20-04-1998
			ZA	9707298 A	20-04-1998
US 5726144	Α	10-03-1998	WO	9708285 A1	06-03-1997
			ΑT	212658 T	15-02-2002
			AU	697454 B2	08-10-1998
			AU	6778996 A	19-03-1997
			CA	2230298 A1	06-03-1997
			CN	1198184 A ,B	04-11-1998
			CZ	9800607 A3	12-08-1998
			DE	69618969 D1	14-03-2002
			DK	850291 T3	21-05-2002
			EP	0850291 A1	01-07-1998
			HU	9802540 A2	01-02-1999
			JP	11511497 T	05-10-1999
			NO.	980847 A	15-04-1998
			NZ	315956 A	23-12-1998
			PL	325230 A1	06-07-1998
			TR	9800329 T1	
			ZA		21-05-1998
				9607116 A	23-02-1998
EP 0799887	Α	08-10-1997	EP	0799887 A1	08-10-1997
	••		ĀŪ	2595197 A	22-10-1997
			BR	9710451 A	17-08-1999
			CA	2250909 A1	
			CN	1220694 A	09-10-1997
					23-06-1999
			WO	9736981 A1	09-10-1997
		•	US	6020304 A	01-02-2000
			ZA	9702774 A	24-10-1997

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

FORM P0459

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 11 7373

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-07-2002

Patent documer cited in search re		Publication date		Patent family member(s)	Publication date
US 5114600	A	19-05-1992	AT CA DE DE DK EP ES WO JP	117360 T 2029886 A1 69016148 D1 69016148 T2 422179 T3 0422179 A1 2067025 T3 9012862 A1 2790727 B2 3505614 T	15-02-1995 22-10-1990 02-03-1995 18-05-1995 20-03-1995 17-04-1991 16-03-1995 01-11-1990 27-08-1998 05-12-1991
				3505614 T	05-12-1991
•					

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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